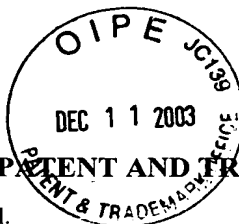


Docket No. 242682US2S/shb



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Kentaro NAKAJIMA, et al.

SERIAL NO: 10/660,677

GAU:

FILED: September 12, 2003

EXAMINER:

FOR: MAGNETIC MEMORY DEVICE WITH DIVIDED WRITE WIRINGS

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

  
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Joseph A. Scafetta, Jr.  
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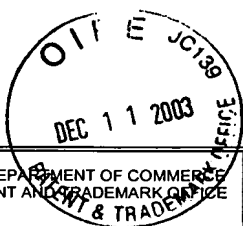
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Form PTO 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

242682US2S

SERIAL NO.

10/660,677

## LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Kentaro NAKAJIMA, et al.

FILING DATE

September 12, 2003

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5,940,319	08/17/1999	M. DURLAM, et al.			
	AB	5,956,267	09/21/1999	A. T. HURST, et al.			
	AC	5,946,228	08/31/1999	D. W. ABRAHAM, et al.			
	AD	6,072,718	06/06/2000	D. W. ABRAHAM, et al.			
	AE	6,104,633	08/15/2000	D. W. ABRAHAM, et al.			
	AF	6,005,800	12/21/1999	R. H. KOCH, et al.			
	AG	6,081,445	06/27/2000	J. SHI, et al.			
	AH	6,134,139	10/17/2000	M. K. BHATTACHARYYA, et al.			
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AO	WO 001/10172	02/24/2000	WIPO (with English Abstract and corr. JP 2002-522915)		X
	AP	2002-522915	07/23/2002	JAPAN		X
	AQ	8-306014	11/22/1996	JAPAN (with English Abstract)		X
	AR					
	AS					
	AT					
	AU					

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AV	S. TEHRANI, et al., Journal of Applied Physics, Magnetoresistive Magnetic Random Access Memory, vol. 85, no. 8, pages 5822-5827, "HIGH DENSITY SUBMICRON MAGNETORESISTIVE RANDOM ACCESS MEMORY (INVITED)", April 15, 1999
	AW	R. SCHEUERLEIN, et al., IEEE International Solid-State Circuits Conference, ISSCC 2000 / Session 7 / TD: Emerging Memory & Device Technologies / Paper TA 7.2, pages 128-129, "A 10ns READ AND WRITE NON-VOLATILE MEMORY ARRAY USING A MAGNETIC TUNNEL JUNCTION AND FET SWITCH IN EACH CELL", February 8, 2000
	AX	M. SATO, et al., IEEE Transactions on Magnetics, vol. 33, no. 5, pages 3553-3555, "SPIN-VALVE-LIKE PROPERTIES AND ANNEALING EFFECT IN FERROMAGNETIC TUNNEL JUNCTIONS", September 1997
	AY	M. SATO, et al., Jpn. J. Appl. Phys., vol. 36, part 2, no. 2B, pages L 200-L 201, "SPIN-VALVE-LIKE PROPERTIES OF FERROMAGNETIC TUNNEL JUNCTIONS", February 15, 1997
	AZ	K. INOMATA, et al., Jpn. J. Appl. Phys., vol. 36, part 2, no. 10B, pages L 1380-L 1383, "SPIN-DEPENDENT TUNNELING BETWEEN A SOFT FERROMAGNETIC LAYER AND HARD MAGNETIC NANOSIZE PARTICLES", October 15, 1997

☐ Additional References sheet(s) attached

Examiner

Date Considered

\*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DOCKET NO.: 242682US2S/shb

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**STATEMENT OF RELEVANCY**

**Reference AV on Form PTO 1449:**

This reference describes MRAM using writing conductive metals which run near the memory cells and go back and run near them again two or three times. Using this technology, writing current can be reduced.